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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|--------------------------------|-------------|-----------------------|---------------------|------------------|
| 10/677,596 | 10/02/2003 | William R. Eisenstadt | 5853-268 | 8230 |
| 30448 | 7590 | 02/24/2006 | EXAMINER | |
| AKERMAN SENTERFITT | | | PARRIES, DRU M | |
| P.O. BOX 3188 | | | ART UNIT | PAPER NUMBER |
| WEST PALM BEACH, FL 33402-3188 | | | 2836 | |

DATE MAILED: 02/24/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | |
|------------------------------|------------------------|------------------------|--|
| Office Action Summary | Application No. | Applicant(s) | |
| | 10/677,596 | EISENSTADT, WILLIAM R. | |
| | Examiner | Art Unit | |
| | Dru M. Parries | 2836 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 October 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-31 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-31 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 02 October 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>3-12-04</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-4, 6, 9, 17-20, 22, and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Iwase (6,656,618). Iwase teaches a circuit comprising a DC-DC converter (38) for receiving a supply voltage and produces an intermediate voltage that is greater than the supply voltage and received by the processing circuitry (inverter, 44) (Col. 7, lines 44-46). The processing circuitry receives a time-varying input signal (intermediate voltage) and modifies the voltage level to produce three modified time-varying signals (Col. 8, lines 15-22). The signal and processing circuitry are analog. He fails to teach this circuit being an IC circuit and having a plurality of them disposed on a circuit board. It would have been obvious to one of ordinary skill in the art at the time of the invention to have this circuit be an IC circuit, since it has been held that forming in one piece an article which has formerly been formed in two pieces and put together involves only routine skill in the art. *Howard v. Detroit Stove Works*, 150 U.S.164 (1893). It also would have been obvious to one of ordinary skill in the art at the time of the invention to place a plurality of these IC circuits on a circuit board, since it has been held that mere duplication of the essential working parts of a device has no patentable significance unless a new and unexpected result is produced. *In re Harza*, 124 USPQ 378.

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3. Claims 5, 7, 8, 15-16, 21, 23, 24, and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Masuda et al. (2004/0036724) and Jones (4,533,986). Masuda teaches a DC-DC converter that receives a supply voltage (30V) and produces a plurality of different intermediate voltages to supply to inkjet printheads. He also teaches processing circuitry (D/A converter, 64) for receiving one time-varying digital signal and modifying a parameter of the signal to produce a modified signal ([0106]). Masuda fails to teach the intermediate voltage being greater than the supply voltage. Jones teaches the use of a DC-DC boost converter (Abstract). It would have been obvious to one of ordinary skill in the art at the time of the invention to replace the DC-DC converter in Masuda's invention with a DC-DC boost converter in case the supply voltage decreased or so that the invention could be powered by a lower voltage source. He also fails to teach this circuit being an IC circuit and having a plurality of them disposed on a circuit board. It would have been obvious to one of ordinary skill in the art at the time of the invention to have this circuit be an IC circuit, since it has been held that forming in one piece an article which has formerly been formed in two pieces and put together involves only routine skill in the art. *Howard v. Detroit Stove Works*, 150 U.S.164 (1893). It also would have been obvious to one of ordinary skill in the art at the time of the invention to place a plurality of these IC circuits on a circuit board, since it has been held that mere duplication of the essential working parts of a device has no patentable significance unless a new and unexpected result is produced. *In re Harza*, 124 USPQ 378.

4. Claims 10, 12, and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kannan et al. (2004/0129888). Kannan teaches a digital pocket radiation dosimeter. He teaches a DC-DC converter (6, Fig. 1; [0085], lines 2-5) producing an intermediate voltage. He also

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teaches processing circuitry (9) receiving a time-varying input signal and producing a modified time-varying signal. He teaches that a parameter (voltage) of the time-varying signal that is modified is programmable via passive elements (7 & 8; [0088]). The detector (1) is read on the main element and all the other devices in the circuit are read on the peripheral elements. Also, it would have been obvious to one of ordinary skill in the art at the time of the invention to separate the parts of the pocket dosimeter into their own peripheral units since it has been held that constructing a formerly integral structure in various elements involves only routine skill in the art. *Nerwin v. Erlichman*, 168 USPQ 177, 179.

5. Claims 26, 28 and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kannan et al. (2004/0129888) and Iwase (6,656,618). Kannan teaches a digital pocket radiation dosimeter as described above. He fails to teach an integrated power supply circuit and the dosimeter being on an integrated circuit and there being a plurality of them. Iwase teaches a power supply circuit (20-44, Fig. 1). It would have been obvious to one of ordinary skill in the art at the time of the invention to use Iwase's power supply circuit to replace the battery (3) in Kannan's invention, so that the source of power can be more reliable and would last longer. It also would have been obvious to one of ordinary skill in the art at the time of the invention to have Kannan's dosimeter and Iwase's power supply circuit on IC circuits, since it has been held that forming in one piece an article which has formerly been formed in two pieces and put together involves only routine skill in the art. *Howard v. Detroit Stove Works*, 150 U.S.164 (1893). It also would have been obvious to one of ordinary skill in the art at the time of the invention to place the plurality of IC circuits on a circuit board, since it has been held that

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rearranging parts of an invention involves only routine skill in the art. *In re Japikse*, 86 USPQ 70.

6. Claims 11 and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Iwase (6,656,618) as applied to claims 1 and 17 above, and further in view of Northrup et al. (6,836,028). Iwase teaches a system as described above. He fails to teach input and output buffers on the processing circuitry (a.k.a. inverter). Northrup teaches having input and output buffers on an inverter (53/54 & 57, Fig. 3; Col. 5, lines 3-12). It would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the input and output buffers into Iwase's invention to minimize harmonic distortion and to smooth the DC input to the inverter.

7. Claims 14 and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Iwase (6,656,618) as applied to claims 1 and 17 above, and further in view of Maksimovic et al. ("Switched-Capacitor DC-DC Converters for Low-Power On-Chip Applications"). Iwase teaches a system as described above. He fails to explicitly teach the type of DC-DC converter used. Maksimovic teaches a switched capacitor based DC-DC converter (Abstract). It would have been obvious to one of ordinary skill in the art at the time of the invention to use Maksimovic's switched capacitor based DC-DC converter as the converter in Iwase's invention because it allows for greater efficiency in the circuit and it is known to work in the art and Iwase was silent as to the type of converter used.

Conclusion


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dru M. Parries whose telephone number is (571) 272-8542. The examiner can normally be reached on Monday -Thursday from 8:00am to 5:00pm. The examiner can also be reached on alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Brian Sircus, can be reached on 571-272-2800 x 36. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

DMP

2-7-2006



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